

## Nursing Facility MDS Record Selection and Case Mix Calculation SFY 2006, Quarter 1 (July 2005)

The following is a brief overview of the steps involved in calculating the case mix for each NF beginning in State FY2006:

1. Obtain an updated list of Medicaid NF residents with an add-on rate from the Resident Assessment team. Import new records into the “AddOnRateRecipients” table.
2. Append new Medicaid MDS data into the “MdsAllData” table.

- a. Append new Medicaid Discharge records to the “MdsAllData” table.
- b. Append new Medicaid Assessment records to the “MdsAllData” table.

**Note:** This will only append new assessment data (i.e., a new Assessment Internal ID) to retain the integrity of historical data. **Any changes to a prior assessment will not be added to the table, nor will those changes be updated in the previously loaded assessment record.**

3. Remove records from the “MdsAllData” table if the assessment occurs while the person is receiving an “ISC” add-on rate amount. Append the removed records to the “MdsAllData\_Excluded\_IntensiveSkilled” table for reference.
4. Calculate the RUG days by entering the “period of interest” dates on the MS Access form and clicking the calculate days button.
  - a. Calculate Days button – This button will calculate the individual RUG days by executing Visual Basic code (see Appendix A) for the period of interest (12/1/2004 – 3/31/2005 for the 7/1/2005 rates) against the “qryGetData” query which contains the following data:
    - i. FacilityMedicaidID (Sort1)
    - ii. SSN (Sort2)
    - iii. AdmitDate
    - iv. AssessmentDate (Sort3) – This is a calculated field and is determined as follows:
      1. IIf(IsNull(MdsAllData.AssessmentDate), MdsAllData.DischargeDate, MdsAllData.AssessmentDate)
    - v. DischargeDate
    - vi. StateCalculatedMedicaidRUG
    - vii. AssessmentInternalID (Sort4)
  - b. The results of this VB script are loaded in the “tblResults” table.
5. Validate that no resident has more total days than is possible in the period of interest. If a resident is found to have more days, then remove that residents data from the “MdsAllData”

table and append it to the “MdsAllData\_ExcludedAssessments\_BadData” table and rerun the casemix calculation as noted in #4 above.

6. Sum the RUG days by RUG as follows:

- |                              |              |
|------------------------------|--------------|
| a. FacilityName              | (Group By)   |
| b. FacilityMedicaidID        | (Group By)   |
| c. RUG                       | (Group By)   |
| d. Weight                    | (Group By)   |
| e. Days                      | (Sum)        |
| f. WgtXDays: [Weight]*[Days] | (Expression) |

7. Sum the RUG days by facility as follows:

- |   |              |
|---|--------------|
| a. FacilityMedicaidID                           | (Group By)   |
| b. FacilityName                                 | (Group By)   |
| c. TotalDays: Sum(tblResults_DaysRugs_Sum!Days) | (Expression) |
| d. SumWgtXDays: WgtXDays                        | (Sum)        |
| e. CaseMix: [SumWgtXDays]/[TotalDays]           | (Expression) |

**Notes:**

- MDS Section AA, question 8b (Codes for assessments required for Medicare PPS or the State) – Any value other than “6” or Null is a Medicare assessment and would not be included in a Medicaid casemix calculation.
- ResidentMedicaidID – This field is used to help in determining if a resident is Medicaid eligible. We have tried to be very open on this and have attempted to err on the side of including the records.

Minimum Data Set (MDS) – Version 2.0 instructions for Section AA, question 7 states the following: “Medicaid No. [“+” if pending, “N” if not a Medicaid recipient].” There is a further note, via asterisk, that the field is a key item for computerized resident tracking.

We have noted quite a variety of responses in this field that do not follow the instructions for data entry. (Examples: APPLY, D, N/A, NONE, NON3E, P, PENDING, ZHC...)

We have also noted many instances where the SSN was used in the ResidentMedicaidID field. Going forward, new assessment records will not be added to our DB where

- AA8B is other than “6” or Null **and**
- ResidentMedicaidID is other than a 10-digit numeric or a “+” (the quotation marks would not actually be included in the field).

## Appendix A – Visual Basic script for RUG days calculation

```
Private Sub Command8_Click()
Dim rs, rs2 As ADODB.Recordset
Dim strFacility, strSSN, strRUG, strRUGLast2, strFacilityLast, strSSNLast, strRUGLast, strSQL
As String
Dim dtmFirstAdmit, dtmAssessment, dtmAdmit, dtmBegin, dtmEnd, dtmDischarge,
dtmDischargeLast As Date
Dim intDays As Integer
Dim blnSkip, blnYouDirtyRat As Boolean
Set rs = New ADODB.Recordset
rs.Open "qryGetData", CurrentProject.AccessConnection, adOpenForwardOnly,
adLockReadOnly
DoCmd.SetWarnings (WarningsOff)
DoCmd.RunSQL "DELETE FROM tblResults"
While Not rs.EOF
    dtmAdmit = Null
    strFacility = rs.Fields(0)
    strSSN = rs.Fields(1)
    dtmAdmit = rs.Fields(2)
    dtmAssessment = rs.Fields(3)
    dtmDischarge = rs.Fields(4)
    strRUG = rs.Fields(5)

    'Finish with the last record
    If Not blnYouDirtyRat And Not IsNull(strRUGLast) And dtmAssessmentLast >
Me.tbPeriodBegin.Value And dtmAssessmentLast <= Me.tbPeriodEnd.Value Then
        If strFacility <> strFacilityLast Or strSSN <> strSSNLast Then
            'Close the last record
            dtmBegin = dtmAssessmentLast
            dtmEnd = Me.tbPeriodEnd.Value
            intDays = DateDiff("D", dtmBegin, dtmEnd) + 1
            Call CheckInput(strFacilityLast, strSSNLast, dtmBegin, dtmEnd, intDays, strRUGLast)
            DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart,
dtmEnd, intDays, strRUG)VALUES('" & strFacilityLast & "', '" & strSSNLast & "', #" &
dtmBegin & "##" & dtmEnd & "##" & intDays & "', '" & strRUGLast & "')"
            End If
        End If
        blnYouDirtyRat = False

        'Reset the FirstAdmit Date if this is a new person
        If strFacility <> strFacilityLast Or strSSN <> strSSNLast Then
            dtmFirstAdmit = #12:00:00 AM#
        End If
    End While
End Sub
```

```

'Check for an admit date - this denotes that the person just started
If dtmFirstAdmit = #12:00:00 AM# And Not IsNull(dtmAdmit) Then
    dtmFirstAdmit = dtmAdmit
'Check to see if the admit date is within our range of interest
If dtmAdmit >= Me.tbPeriodBegin.Value And dtmAdmit <= Me.tbPeriodEnd.Value Then
    dtmBegin = dtmAdmit
'Check to see if the assesment date is within our range of interest
If dtmAssessment >= Me.tbPeriodBegin.Value And dtmAssessment <=
Me.tbPeriodEnd.Value Then
    dtmEnd = dtmAssessment
    intDays = DateDiff("D", dtmBegin, dtmEnd)
    If Not IsNull(dtmDischarge) Then
        intDays = intDays + 1
    End If
Else
    dtmEnd = Me.tbPeriodEnd.Value
    intDays = DateDiff("D", dtmBegin, dtmEnd) + 1
End If
'Insert this value into the table using the default RUG
Call CheckInput(strFacility, strSSN, dtmBegin, dtmEnd, intDays, "PA1")
DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart,
dtmEnd, intDays, strRUG)VALUES('" & strFacility & "', '" & strSSN & "', #" & dtmBegin &
"##" & dtmEnd & "##" & intDays & "', 'PA1')"
    blnSkip = True
End If
'Check to see if the assessment date is within our range of interest
If Not blnSkip And dtmAssessment >= Me.tbPeriodBegin.Value And dtmAssessment <=
Me.tbPeriodEnd.Value Then
    dtmBegin = Me.tbPeriodBegin.Value
    dtmEnd = dtmAssessment
'Insert this value into the table using the default RUG
    intDays = DateDiff("D", dtmBegin, dtmEnd)
    If Not IsNull(dtmDischarge) Then
        intDays = intDays + 1
    End If
    Call CheckInput(strFacility, strSSN, dtmBegin, dtmEnd, intDays, "PA1")
    DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart,
dtmEnd, intDays, strRUG)VALUES('" & strFacility & "', '" & strSSN & "', #" & dtmBegin &
"##" & dtmEnd & "##" & intDays & "', 'PA1')"
        blnSkip = True
    End If
Else
    'Is this a new Person
    If strFacility <> strFacilityLast Or strSSN <> strSSNLast Then
        Set rs2 = New ADODB.Recordset

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rs2.Open "SELECT count(FacilityMedicaidID) as num from MdsAllData WHERE
FacilityMedicaidID = " & strFacility & " AND SSN = " & strSSN & "",
CurrentProject.AccessConnection, adOpenStatic, adLockReadOnly
While Not rs2.EOF
    If rs2.Fields(0) = 1 Then
        'There is only one record and it does not have an Admit Date
        If dtmAssessment >= Me.tbPeriodBegin.Value And dtmAssessment <=
Me.tbPeriodEnd.Value Then
            intDays = 0
            Call CheckInput(strFacility, strSSN, dtmAssessment, dtmAssessment, intDays,
"PA1")
            DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart,
dtmEnd, intDays, strRUG)VALUES(" & strFacility & ", " & strSSN & ", #" & dtmAssessment
& "#,#" & dtmAssessment & "#," & intDays & ", 'PA1')"
            blnSkip = True
            blnYouDirtyRat = True
            strRUGLast = Null
        End If
    Else
        If dtmAssessment >= Me.tbPeriodBegin.Value And dtmAssessment <=
Me.tbPeriodEnd.Value Then
            'This is the first record and there is not a previous RUG. Assume the default rug
            dtmEnd = dtmAssessment
            If dtmEnd = dtmDischarge Then
                'Instant discharge, no time on this one
                dtmBegin = dtmEnd
                intDays = 0
            Else
                dtmBegin = Me.tbPeriodBegin.Value
                intDays = DateDiff("D", dtmBegin, dtmEnd)
            End If
            Call CheckInput(strFacility, strSSN, dtmBegin, dtmEnd, intDays, "PA1")
            DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart,
dtmEnd, intDays, strRUG)VALUES(" & strFacility & ", " & strSSN & ", #" & dtmBegin &
"#,#" & dtmEnd & "#," & intDays & ", 'PA1')"
            blnSkip = True
        End If
    End If
    rs2.MoveNext
Wend
End If
End If

'Was the last record discharged for this person
If Not blnSkip And dtmDischargeLast <> #12:00:00 AM# And strFacilityLast = strFacility
And strSSNLast = strSSN Then

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    blnSkip = True
    'Since there is not an admit date check for a discharge date
    If Not IsNull(dtmDischarge) And dtmDischarge >= Me.tbPeriodBegin.Value And
dtmDischarge <= Me.tbPeriodEnd.Value Then
        Call CheckInput(strFacilityLast, strSSNLast, dtmAssessment, dtmAssessment, 0, "PA1")
        DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart,
dtmEnd, intDays, strRUG)VALUES('" & strFacilityLast & "', '" & strSSNLast & "', #" &
dtmAssessment & "#,#" & dtmAssessment & "#,0, 'PA1')"
        strRUGLast = Null
    End If
End If

'Now assign the Admit date the last known value of the assessment date if the person and
facility are the same
If Not blnSkip And strFacilityLast = strFacility And strSSNLast = strSSN Then
    dtmAdmit = dtmAssessmentLast
    'check to see if the admit date is within the range of interest
    If dtmAdmit >= Me.tbPeriodBegin.Value And dtmAdmit <= Me.tbPeriodEnd.Value Then
        dtmBegin = dtmAdmit
        'check to see if the assessment date is within the range of interest
        If dtmAssessment >= Me.tbPeriodBegin.Value And dtmAssessment <=
Me.tbPeriodEnd.Value Then
            dtmEnd = dtmAssessment
            intDays = DateDiff("D", dtmBegin, dtmEnd)
            If Not IsNull(dtmDischarge) Then
                intDays = intDays + 1
            End If
        Else
            dtmEnd = Me.tbPeriodEnd.Value
            intDays = DateDiff("D", dtmBegin, dtmEnd) + 1
        End If
        'insert this record into the table
        Call CheckInput(strFacility, strSSN, dtmBegin, dtmEnd, intDays, strRUGLast)
        DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart,
dtmEnd, intDays, strRUG)VALUES('" & strFacility & "', '" & strSSN & "', #" & dtmBegin &
"#,#" & dtmEnd & "#,#" & intDays & "', '" & strRUGLast & "#)"
        blnSkip = True
    End If
    'Check to see if the assessment date is within the range of interest
    If Not blnSkip And dtmAssessment > Me.tbPeriodBegin.Value And dtmAssessment <=
Me.tbPeriodEnd.Value Then
        dtmBegin = Me.tbPeriodBegin.Value
        dtmEnd = dtmAssessment
        'insert this record into the table
        intDays = DateDiff("D", dtmBegin, dtmEnd)
        If Not IsNull(dtmDischarge) Then

```

```

        intDays = intDays + 1
    End If
    Call CheckInput(strFacility, strSSN, dtmBegin, dtmEnd, intDays, strRUGLast)
    DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart,
dtmEnd, intDays, strRUG)VALUES('" & strFacility & "', '" & strSSN & "', #" & dtmBegin &
"#, #" & dtmEnd & "#, " & intDays & ", '" & strRUGLast & "')"
        blnSkip = True
    End If
End If

blnSkip = False

strFacilityLast = strFacility
strSSNLast = strSSN
strRUGLast2 = strRUGLast
strRUGLast = strRUG
dtmAssessmentLast = dtmAssessment
If Not IsNull(dtmDischarge) Then
    dtmDischargeLast = dtmDischarge
Else
    dtmDischargeLast = #12:00:00 AM#
End If
rs.MoveNext
Wend
'Finish with the last record
If Not IsNull(strRUGLast2) And dtmAssessmentLast > Me.tbPeriodBegin.Value And
dtmAssessmentLast <= Me.tbPeriodEnd.Value Then
    'Close the last record
    dtmBegin = dtmAssessment
    dtmEnd = Me.tbPeriodEnd.Value
    intDays = DateDiff("D", dtmBegin, dtmEnd) + 1
    Call CheckInput(strFacility, strSSN, dtmBegin, dtmEnd, intDays, strRUGLast)
    DoCmd.RunSQL "INSERT INTO tblResults(FacilityMedicaidID, SSN, dtmStart, dtmEnd,
intDays, strRUG)VALUES('" & strFacility & "', '" & strSSN & "', #" & dtmBegin & "#, #" &
dtmEnd & "#, " & intDays & ", '" & strRUGLast & "')"
End If

DoCmd.SetWarnings (WarningsOn)
End Sub

```